

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.**

Application Serial Number: 10/539,677

Source: P4/10

Date Processed by STIC: 6/29/05

# ***ENTERED***



PCT

## RAW SEQUENCE LISTING

DATE: 06/29/2005

PATENT APPLICATION: US/10/539,677

TIME: 14:02:29

Input Set : A:\194\_PCT Sequence Listing.ST25.txt

Output Set: N:\CRF4\06292005\J539677.raw

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3 <110> APPLICANT: University of Maryland Biotechnology Institute
4     Pauza, C. David
5     Tikhonov, Ilia
7 <120> TITLE OF INVENTION: VACCINES AGAINST HIV-1 PROTEIN TO GENERATE NEUTRALIZING
8     ANTIBODIES
10 <130> FILE REFERENCE: 4115-194
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/539,677
13 <141> CURRENT FILING DATE: 2005-06-16
15 <150> PRIOR APPLICATION NUMBER: US 60/434,368
16 <151> PRIOR FILING DATE: 2002-12-18
18 <160> NUMBER OF SEQ ID NOS: 51
20 <170> SOFTWARE: PatentIn version 3.3
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 21
24 <212> TYPE: PRT
25 <213> ORGANISM: Human immunodeficiency virus type 1
28 <220> FEATURE:
29 <221> NAME/KEY: MISC_FEATURE
30 <222> LOCATION: (21)..(21)
31 <223> OTHER INFORMATION: X may be any amino acid, preferably A or P
33 <400> SEQUENCE: 1
35 Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
36 1           5           10           15
W--> 39 Gln Pro Lys Thr Xaa
40           20
43 <210> SEQ ID NO: 2
44 <211> LENGTH: 21
45 <212> TYPE: PRT
46 <213> ORGANISM: Human immunodeficiency virus type 1
49 <220> FEATURE:
50 <221> NAME/KEY: MISC_FEATURE
51 <222> LOCATION: (21)..(21)
52 <223> OTHER INFORMATION: X may be any amino acid, preferably A or P
54 <400> SEQUENCE: 2
56 Met Glu Pro Val Asp Pro Asn Leu Glu Pro Trp Asn His Pro Gly Ser
57 1           5           10           15
W--> 60 Gln Pro Lys Thr Xaa
61           20
64 <210> SEQ ID NO: 3
65 <211> LENGTH: 21
66 <212> TYPE: PRT
67 <213> ORGANISM: Human immunodeficiency virus type 1
70 <220> FEATURE:

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71 <221> NAME/KEY: MISC_FEATURE
72 <222> LOCATION: (21)..(21)
73 <223> OTHER INFORMATION: X may be any amino acid, preferably A or P
75 <400> SEQUENCE: 3
77 Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Asn His Pro Gly Ser
78 1          5          10          15
W--> 81 Gln Pro Lys Thr Xaa
82          20
85 <210> SEQ ID NO: 4
86 <211> LENGTH: 21
87 <212> TYPE: PRT
88 <213> ORGANISM: Human immunodeficiency virus type 1
91 <220> FEATURE:
92 <221> NAME/KEY: MISC_FEATURE
93 <222> LOCATION: (21)..(21)
94 <223> OTHER INFORMATION: X may be any amino acid, preferably A or P
96 <400> SEQUENCE: 4
98 Met Glu Pro Val Asp Pro Asn Leu Glu Pro Trp Lys His Pro Gly Ser
99 1          5          10          15
W--> 102 Gln Pro Lys Thr Xaa
103         20
106 <210> SEQ ID NO: 5
107 <211> LENGTH: 21
108 <212> TYPE: PRT
109 <213> ORGANISM: Human immunodeficiency virus type 1
111 <400> SEQUENCE: 5
113 Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
114 1          5          10          15
117 Gln Pro Lys Thr Ala
118         20
121 <210> SEQ ID NO: 6
122 <211> LENGTH: 21
123 <212> TYPE: PRT
124 <213> ORGANISM: Human immunodeficiency virus type 1
126 <400> SEQUENCE: 6
128 Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
129 1          5          10          15
132 Gln Pro Lys Thr Pro
133         20
136 <210> SEQ ID NO: 7
137 <211> LENGTH: 63
138 <212> TYPE: DNA
139 <213> ORGANISM: Human immunodeficiency virus type 1
142 <220> FEATURE:
143 <221> NAME/KEY: misc_feature
144 <222> LOCATION: (61)..(63)
145 <223> OTHER INFORMATION: nnn may be any codon, preferably encoding A or P
147 <400> SEQUENCE: 7
148 atggagccag tagatcctag actagagccc tggaagcatc caggaagtca gcctaagact      60

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W--> 150 nnn 63
153 <210> SEQ ID NO: 8
154 <211> LENGTH: 63
155 <212> TYPE: DNA
156 <213> ORGANISM: Human immunodeficiency virus type 1
159 <220> FEATURE:
160 <221> NAME/KEY: misc_feature
161 <222> LOCATION: (61)..(63)
162 <223> OTHER INFORMATION: nnn may be any codon, preferably encoding A or P
164 <400> SEQUENCE: 8
165 atggagccag tagatcctaa tctagagccc tggaatcatc caggaagtca gcctaagact 60
W--> 167 nnn 63
170 <210> SEQ ID NO: 9
171 <211> LENGTH: 63
172 <212> TYPE: DNA
173 <213> ORGANISM: Human immunodeficiency virus type 1
176 <220> FEATURE:
177 <221> NAME/KEY: misc_feature
178 <222> LOCATION: (61)..(63)
179 <223> OTHER INFORMATION: nnn may be any codon, preferably encoding A or P
181 <400> SEQUENCE: 9
182 atggagccag tagatcctag actagagccc tggaatcatc caggaagtca gcctaagact 60
W--> 184 nnn 63
187 <210> SEQ ID NO: 10
188 <211> LENGTH: 63
189 <212> TYPE: DNA
190 <213> ORGANISM: Human immunodeficiency virus type 1
193 <220> FEATURE:
194 <221> NAME/KEY: misc_feature
195 <222> LOCATION: (61)..(63)
196 <223> OTHER INFORMATION: nnn may be any codon, preferably encoding A or P
198 <400> SEQUENCE: 10
199 atggagccag tagatcctaa tctagagccc tggaagcatc caggaagtca gcctaagact 60
W--> 201 nnn 63
204 <210> SEQ ID NO: 11
205 <211> LENGTH: 63
206 <212> TYPE: DNA
207 <213> ORGANISM: Human immunodeficiency virus type 1
209 <400> SEQUENCE: 11
210 atggagccag tagatcctag actagagccc tggaagcatc caggaagtca gcctaagact 60
212 gct 63
215 <210> SEQ ID NO: 12
216 <211> LENGTH: 63
217 <212> TYPE: DNA
218 <213> ORGANISM: Human immunodeficiency virus type 1
220 <400> SEQUENCE: 12
221 atggagccag tagatcctag actagagccc tggaagcatc caggaagtca gcctaagact 60
223 ccc 63
226 <210> SEQ ID NO: 13

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Input Set : A:\194\_PCT Sequence Listing.ST25.txt

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227 <211> LENGTH: 15  
 228 <212> TYPE: PRT  
 229 <213> ORGANISM: Artificial Sequence  
 231 <220> FEATURE:  
 232 <223> OTHER INFORMATION: Synthetic Construct  
 234 <400> SEQUENCE: 13  
 236 Ser Tyr Gly Ser Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln  
 237 1 5 10 15  
 240 <210> SEQ ID NO: 14  
 241 <211> LENGTH: 12  
 242 <212> TYPE: PRT  
 243 <213> ORGANISM: Artificial Sequence  
 245 <220> FEATURE:  
 246 <223> OTHER INFORMATION: Synthetic Construct  
 248 <400> SEQUENCE: 14  
 250 Ser Tyr Gly Ser Lys Lys Arg Arg Gln Arg Arg Arg  
 251 1 5 10  
 254 <210> SEQ ID NO: 15  
 255 <211> LENGTH: 16  
 256 <212> TYPE: PRT  
 257 <213> ORGANISM: Artificial Sequence  
 259 <220> FEATURE:  
 260 <223> OTHER INFORMATION: Synthetic Construct  
 262 <400> SEQUENCE: 15  
 264 Lys Ala Leu Gly Ile Ser Tyr Gly Ser Lys Lys Arg Arg Gln Arg Arg  
 265 1 5 10 15  
 268 <210> SEQ ID NO: 16  
 269 <211> LENGTH: 20  
 270 <212> TYPE: PRT  
 271 <213> ORGANISM: Artificial Sequence  
 273 <220> FEATURE:  
 274 <223> OTHER INFORMATION: Synthetic Construct  
 276 <400> SEQUENCE: 16  
 278 Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser  
 279 1 5 10 15  
 282 Gln Pro Lys Thr  
 283 20  
 286 <210> SEQ ID NO: 17  
 287 <211> LENGTH: 20  
 288 <212> TYPE: PRT  
 289 <213> ORGANISM: Artificial Sequence  
 291 <220> FEATURE:  
 292 <223> OTHER INFORMATION: Synthetic Construct  
 294 <400> SEQUENCE: 17  
 296 Met Glu Pro Val Asp Pro Lys Leu Glu Pro Trp Lys His Pro Gly Ser  
 297 1 5 10 15  
 300 Gln Pro Arg Thr  
 301 20  
 304 <210> SEQ ID NO: 18

## RAW SEQUENCE LISTING

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305 <211> LENGTH: 20
306 <212> TYPE: PRT
307 <213> ORGANISM: Artificial Sequence
309 <220> FEATURE:
310 <223> OTHER INFORMATION: Synthetic Construct
312 <400> SEQUENCE: 18
314 Met Glu Pro Val Asp Pro Asn Leu Glu Pro Trp Lys His Pro Gly Ser
315 1          5          10          15
318 Gln Pro Arg Thr
319          20
322 <210> SEQ ID NO: 19
323 <211> LENGTH: 20
324 <212> TYPE: PRT
325 <213> ORGANISM: Artificial Sequence
327 <220> FEATURE:
328 <223> OTHER INFORMATION: Synthetic Construct
330 <400> SEQUENCE: 19
332 Met Glu Pro Val Asp Pro Asn Leu Glu Pro Trp Asn His Pro Gly Ser
333 1          5          10          15
336 Gln Pro Lys Thr
337          20
340 <210> SEQ ID NO: 20
341 <211> LENGTH: 20
342 <212> TYPE: PRT
343 <213> ORGANISM: Artificial Sequence
345 <220> FEATURE:
346 <223> OTHER INFORMATION: Synthetic Construct
348 <400> SEQUENCE: 20
350 Met Asp Pro Val Asp Pro Ser Leu Glu Pro Trp Asn His Pro Gly Ser
351 1          5          10          15
354 Gln Pro Lys Thr
355          20
358 <210> SEQ ID NO: 21
359 <211> LENGTH: 20
360 <212> TYPE: PRT
361 <213> ORGANISM: Artificial Sequence
363 <220> FEATURE:
364 <223> OTHER INFORMATION: Synthetic Construct
366 <400> SEQUENCE: 21
368 Asp Pro Gly Thr Val Glu Pro Lys Pro Leu His Pro Glu Arg Lys Gln
369 1          5          10          15
372 Met Pro Trp Ser
373          20
376 <210> SEQ ID NO: 22
377 <211> LENGTH: 20
378 <212> TYPE: PRT
379 <213> ORGANISM: Artificial Sequence
381 <220> FEATURE:
382 <223> OTHER INFORMATION: Synthetic Construct

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## RAW SEQUENCE LISTING ERROR SUMMARY

DATE: 06/29/2005

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Input Set : A:\194\_PCT Sequence Listing.ST25.txt

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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 21 /

Seq#:2; Xaa Pos. 21 /

Seq#:3; Xaa Pos. 21 /

Seq#:4; Xaa Pos. 21 /

Seq#:7; N Pos. ~~61,62,63~~ /Seq#:8; N Pos. ~~61,62,63~~ /Seq#:9; N Pos. ~~61,62,63~~ /Seq#:10; N Pos. ~~61,62,63~~ /

**VERIFICATION SUMMARY**

DATE: 06/29/2005

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Input Set : A:\194\_PCT Sequence Listing.ST25.txt

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L:12 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:39 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:16  
L:60 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:16  
L:81 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:16  
L:102 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:16  
L:150 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:60  
L:167 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:60  
L:184 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:60  
L:201 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:60